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## 24 Arnside

**Theme:** Earthquakes and folded rocks

### Location

24 Arnside — faulted and folded Carboniferous. Park in Arnside. It is a 6 kilometre return walk along the coast to Park Point [SD 440 766]

### Description

Just inside the southwest border of Cumbria is Arnside, a peninsula with some great folded and broken rocks.

Arnside is part of an Area of Outstanding Natural Beauty (Arnside and Silverdale AONB). It overlooks Morecambe Bay and coastal cliffs two kilometres west of the village provide the chance to get close up to some splendid geology: evidence of ancient Earth movements that deformed these rocks and there are fossils too. The limestones in these rocks were once limey mud together with the shells and skeletons of animals that lived in a warm coral sea at a time when Britain was located just south of the Equator. This was around 340 million years ago during the Carboniferous. You can see the preserved remains of some of those animals (like the coral here but also shellfish called gastropods and brachiopods) in rocks that have been polished by the sea.

Because the sea cliffs cut through and expose the layers of limestone it makes it easier to appreciate the forces at work. North of Park Point are places where you can see both faulting and folding of the rocks. The shallow curved shape of the coast between Park Point and Silverdale is caused by a major fault-line. Most of the breaking and bending we can see took place around 290 million years ago during the 'Variscan Orogeny', a period of mountain building on a continental scale. But these lines of weakness were inherited from a much older time of upheaval in the Earth's crust; 100 million years before.

Arnside's rich wildlife extends from the wading birds that thrive on the sands and muds of the foreshore and estuary, to inland habitats often underpinned by its limestone foundations, with an array of woodland birds, butterflies and wildflowers.

### Photographs

(Photo 24-1) Geological fault in limestone cliffs at Arnside.

(Photo 24-2) Arnside.

(Photo 24-3) Fossil coral in limestone polished by the sea.



*(Photo 24-1) Geological fault in limestone cliffs at Arnside.*



*(Photo 24-2) Arnside.*





*(Photo 24-3) Fossil coral in limestone polished by the sea.*